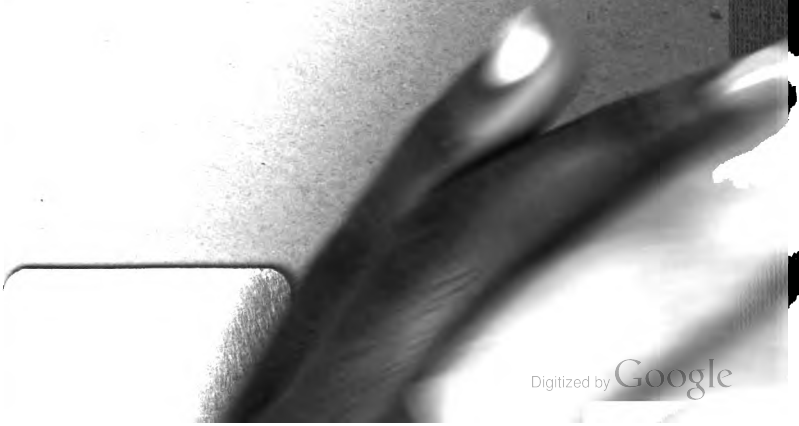

IMPERIAL RAILWAYS

OF

GREAT BRITAIN,

AND

RAILWAY REFORM.

BY

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Second Edition.

Printed by Messrs. Parker, Cornmarket, Oxford.

# The Imperial Railway of Great Britain, &c.



SO great and increasing is now the amount of goods, minerals, and passengers conveyed upon the principal trunk lines of this country, that it has become evident that no long period can elapse before the rapid transport of the mails and express trains over them will be not only a service of danger, but even an absolute impossibility.

Some relief, therefore, must without delay be afforded, and to meet the necessity of the case, as well as to vindicate the right of the public to possess the safest, cheapest, and most expeditious means of conveyance that the advanced science of the age is capable of affording, and for other important public reasons, the Imperial Railway of Great Britain has been projected, and is now, with the hoped-for concurrence of the Government, proposed to be carried into effect.

This new railway, or system of railways, will in the first instance be composed of three sections, extending from a central station on the south side of Holborn, in London, to Dover, Holyhead, and Edinburgh and Glasgow.

1. The first section will be a railway 75 miles in length, from the Imperial Station in London to Dover Harbour. It will cross the Thames between the

Temple and Somerset House, and then proceed, in as straight a line as possible, to Dover. On this section there will be no intermediate station.

2. The second section will be a railway 240 miles in length, from the Imperial Station in London to the harbour of Holyhead. On it there will be two intermediate stations, one at Stratford-on-Avon and the other at or near Shrewsbury.

3. The third section will be a railway 435 miles in length, from the Imperial Station in London to Edinburgh and Glasgow. On this section there will be four intermediate stations—the first at Nottingham, the second at Leeds, the third at Carlisle, and the fourth at Peebles, from which a branch will extend to Glasgow.

Sections 2 and 3 will run side by side for three miles out of London.

The Imperial Railway will be reserved exclusively for the rapid transmission of passengers and light parcels, and of Her Majesty's mails and troops; and on it no accommodation will be provided for any other kind of traffic.

The whole of the new system will be constructed with a double line throughout, and will be made on the broad gauge of 7 ft.[a]

Considering that it will have but few stations and sidings, that it will pass through no large towns except London and Leeds, and that the South Wales Railway, which has also a double line on the broad gauge, was recently completed for £28,000 a mile,

[a] See Appendix A.

it is concluded that the Imperial Railway can be made for £35,000 a mile.

The construction of the whole line—750 miles in length—may therefore be estimated to cost £26,250,000; and allowing £2,000,000 for engines and carriages, and £1,750,000 for contingencies, the total cost of the Imperial Railway will be £30,000,000.

The revenue will be derived as follows:—Four thousand passengers a day travelling each way upon the line, and paying on an average 15s. each, will produce £42,000 a-week, or £2,184,000 a-year. In addition to this £400,000 a-year may be reckoned on for the conveyance of mails and troops, and of light parcels not exceeding 2 cwt. each. Thus the gross annual income will be £2,584,000.

From the nature of the traffic the working expenses will be light, and taking them at 40 per cent. the net revenue will amount to £1,550,400 a-year, or sufficient to pay 5 per cent. on £30,000,000, and leave a considerable surplus.

In 1851, when the Great Western Railway traffic was conducted entirely on the broad gauge, the working expenses, including rates and taxes, were only 32.6565 per cent., and the average of those expenses for the 17½ years previous to the partial introduction of the narrow gauge upon that line in 1861, was only 40.177 per cent. for all kinds of traffic. The estimate, therefore, of 40 per cent. for the working expenses of a broad gauge railway carrying only passengers is not likely, under any circumstances, to be exceeded.

The capital for the Imperial Railway will be raised in the usual way, and vested in the hands of an incorporated company; but the dividend, which will be a preferential charge on the revenues of the company, will be limited to 5 per cent. per annum.

Each section will be constructed and worked under the supervision of a committee of six directors, of whom one, who will have the chief control, will be appointed by Government. The accounts will be audited by responsible public officers, and the remission or alteration of any toll or fare in favour of any individual will be treated as embezzlement.

The greatest care moreover will be taken that the whole railway shall be managed (as indeed all railways ought to be) so as to secure the greatest possible accommodation to that portion of the public for whose use it is intended.

As the principal object of making the Imperial Railway is to obtain a safe, rapid, and easy communication between London and the distant parts of the United Kingdom, and as there will be no stations or dangerous points to be passed by the trains without stopping, it is to be specially provided that not fewer than six trains on each section shall leave London and arrive there every day, Sundays excepted, and that no train shall travel at a lower speed than at the rate of 60 miles an hour, including all stoppages.

Thus the time to be occupied in the journey from London to Dover is not to exceed one hour and a quarter; from London to Holyhead, four hours; from London to Edinburgh (380 miles), six hours

and twenty minutes; and from London to Glasgow (405 miles) six hours and three-quarters.

This rate of travelling is now, under far less favourable circumstances, very nearly attained by the express trains of the Great Western Railway; but as the Imperial Railway itself, as well as its engines and carriages, will all be constructed with every modern improvement, there can be no doubt that the enjoined speed of 60 miles an hour will be easily maintained.

One of the distinctive features of the Imperial Railway will be the unusual lowness of its fares, and the adoption of an unvarying but remunerative charge for long distances irrespective of actual mileage.

The fares will not be allowed to exceed the following rates:—London to Dover, Stratford, or Nottingham—first class, 12s.; second class, 8s.: London to all other stations—first class, 20s.; second class, 15s.: and between any one station and the next—first class, 12s.; second class, 8s. But in no case will a higher fare be charged than—first class, 20s., and second class, 15s. There will be no third class, inasmuch as the average of the second-class fares will be below a penny a mile; nor will there be any return tickets or special rates of any kind.

The scale above given will, it is thought, conduce more to the public advantage and the compactness of the kingdom than if the fares were fixed at the uniform rate of one penny a mile for first-class, and three-farthings a mile for second-class passengers, inasmuch as it will more equally distribute to all

parts of Great Britain and Ireland the immense benefit of a cheap communication with the metropolis.

The gauge, being 7 ft., will not only permit the rate of travelling to be greater than on any other railway in the world, but will conduce to the personal security and comfort of the passengers by enabling the carriages to be built with a passage through them from end to end, to be warmed with stoves in winter, and fitted with many appliances that could not be attempted in narrow carriages made to run on a gauge of only 4 ft. 8½ in.

Another advantage to be gained by adopting the broader gauge is, that it will render it impossible for most of the existing railways to unite their rails with those of the Imperial Railway.

It is, however, desirable that the present railways should have their stations in immediate connexion with those of the Imperial Railway, to which they will be as much as possible subsidiary.

Several lines of broad-gauge railway may hereafter be added in extension of the Imperial system, such as a line through Stirling to Aberdeen, a line from Carlisle to Portpatrick, and another from London to Portland Harbour. All the surplus revenues of the railway will be available for the formation of those extensions; and as there are already broad-gauge railways to the Land's End and Milford Haven, these might with certain improvements be embraced within the system.

The Imperial system will in no way interfere with the local and cross-road traffic of the country.

Owing to the exorbitant fares now exacted of passengers by existing railway companies for travelling between London and the distant provinces, some persons may be disposed to imagine that to charge only £1 for conveying a first-class passenger 400 miles would be altogether unprofitable. But the following calculations will shew that out of a fare of 20s. for the above-stated distance, an ample margin would be allowed for all legitimate profit.

A train capable of conveying 300 passengers on a broad-gauge railway would be composed of an engine and tender worth £3,600, three luggage-vans worth £400 each, and six large carriages, (each capable of holding fifty passengers,) worth £700 apiece. Thus the whole value of the train would be £9,000. Such a train would run the distance from London to Edinburgh at least 360 times without requiring expensive repairs; so that we may value the actual cost of the wear and tear of the train at £25. Adding to this £7 for wages and £8 for coke and oil, the whole cost of each trip would be £40, or at the rate of 2s. 8d. for each passenger if the train were quite full. In this estimate the cost and repair of the railroad itself is not taken into account.

In the Great Northern accounts for 1864 the cost of each train per mile, including engine power, wear and tear of carriages, rails, and road, all rates, taxes, and Government duty, together with all expenditure for police and porters, numerous stations and junctions, accidents, lawyers, and litigation, is estimated

at 2s. 6d. At this rate, to send a train from London to Edinburgh would cost less than £50, and if it conveyed no more than 52 first-class and 64 second-class passengers, it would, if the fares were reduced to 20s. and 15s., yield a clear profit of £50. At present the fares (£3 10s. and £2 11s.) are so enormously high that the net profit of every well-packed train from London to Edinburgh, containing a hundred first and a hundred second-class passengers, may amount to about £550; and calculated at the same rate, the net profit obtained from the Scottish Limited Mail alone would amount to about £400,000 a-year [b].

The truth is, that under the existing system the whole profit of all the railways that reach the metropolis is derived exclusively from passengers who travel long distances upon them; and thus their managing directors, for whose integrity and ability there is no guarantee, and who are now mostly men engaged in trade, are enabled to accommodate themselves or their class by carrying merchandize almost at a loss. As an instance of this, one railway company, notorious for its high passenger tariff, has lately offered to undertake the carriage of any quantity of coals at a farthing a mile per ton. Yet it is certain that five passengers with their luggage could be carried anywhere for less money than a ton of coals. Why, then, should even a third-class passenger, crammed into a wretched coop with fifty other persons, be forced to pay as much per mile as if he were four tons of coal? And why should a gentleman

[b] See Appendix B.

of moderate weight and dimensions, occupying the twentieth part of a first-class carriage, be charged as much for being carried on a railway as if he were ten tons of coal and filled two whole waggons? And why should not the legitimate profit of railways (and that profit ought never to be allowed to exceed five or six per cent.) be drawn from all branches of their traffic alike? It cannot be maintained that the cheap conveyance of passengers is not as much a matter of importance as the cheap carriage of goods. In fact, in every well-governed state the former has always been considered the more important of the two, and has ever been made a subject for magisterial regulation; so that at the present time it is undoubtedly as much the duty of our Government to promote any well-considered scheme, the effect of which would be to restrain railway companies from making an exorbitant profit out of travellers, as it was a few years ago to pass the law that reduced the fares of hackney carriages in London to a rate that allows but the most moderate profit to their owners.

The next question is whether, if all railway fares were reduced by direct enactment, the existing means of communication between London and the most distant parts of the kingdom would be sufficient? In reply to this it is thought that the following statements are enough to prove that our present system would be far from adequate, and not at all to be relied on for the future, even without allowing for the augmented traffic which a great and permanent reduction of fares would produce.

At the present time the fastest trains from London to Holyhead occupy six hours and three-quarters in their transit, travelling at the rate of thirty-nine miles and a half in an hour, and the fastest train to Edinburgh travels at the same rate.

Yet it is to be doubted whether this speed, moderate as it is, can be considered quite consistent with safety on a line crowded with all kinds of goods and passenger trains, which at each station must be shunted into sidings to allow the fast trains to pass. Between London and Holyhead there are no less than sixty-four stations (one-third of which are junctions) that are passed by the Irish mail without stopping; while the Scotch mail, started in pursuit of the Irish night mail only fifteen minutes after it, passes at full speed ninety-seven stations (of which twenty-six are junctions), all abounding with dangerous points requiring the most extreme caution, scrutiny, and attention of several hundred railway officials.

Nor is the present state of things, if left without interference, likely to improve. Every village must now have its branch line or its station, and new branches and stations with their sidings are every day being added, to render still more hazardous the progress of the few fast trains by which the communication between distant parts of the country is now carried on.

Again, it may perhaps be said that our present plan of leaving everything to competition will at last produce a remedy. But apart from the consideration that the internal intercourse of a kingdom is of far

too great public importance to be left to the vagaries of commercial competition, it is now admitted that the hope of that increased speed and that reduction of fares which the formation of competing lines once promised to produce has been ignominiously frustrated. No sooner is a new railway, which had passed through Parliament as a competing line, finished and opened, than the very word competition becomes abhorrent to its directors. To share the profits of the old line becomes at once their main object, and it is only when agreeable terms cannot be extorted in any other way that recourse is had to a temporary lowering of their fares, until at last the old line is obliged to succumb. Then comes the treaty of peace, in which the high contracting parties bind themselves to an alliance offensive and defensive against all that travel their way. Every kind of secret and unlawful agreement is now extant, in some of which neighbouring companies are restricted, except by mutual consent, from reducing their fares, accommodating the public with more frequent trains, or allowing their trains to travel beyond a certain pace. In some instances, such is the desire on the part of railway directors to prevent the chance of competition, that a portion of the receipts of a frequented railway is handed over as a sedatory bribe to its unfrequented neighbour—a transaction not only so opposed to public policy that no government should allow it, but which is also clearly illegal; for of course the shareholders of any railway are unlawfully deprived whenever, without their individual consent, even a shilling earned

on their own railway is diverted from their use to subsidize any other railway.

It is indeed beyond dispute that by means of *ultra vires* agreements one with another the whole body of railway directors, however they may squabble about other matters, are sworn conspirators against all travellers as far as relates to levying the highest amount of black-mail it is possible to extract; so that it is utterly hopeless to look to commercial competition for any extensive improvement in our present means of transit. Is it not, then, high time for the public to ask Parliament for some kind of protection against a great and growing monopoly, which in progress of time will become, if not checked, so powerful in the State as to be an insurmountable impediment in the way of new facilities of intercourse?

In the interests of civilization other Parliaments have abolished all the ancient monopolies, the Corn Laws and the East India Company, have established a uniform low rate of postage, and have reduced or remitted all kinds of duties and taxes on the necessaries of life; it remains now for the new Parliament to revise the chartered powers of railways, and seriously to question the right of a few monopolizing companies to impose, for their own benefit, an onerous tax on railway travelling, which has become one of the great necessities of modern civilization, and is one of the most healthful and innocent enjoyments of existence. Providence has gifted this country with abundance of coal and iron, and given us the men of science who have invented and improved both the

steam-engine and railways. In acknowledging these blessings it is our duty to make a complete use of them, and to oppose the murmurings of avarice and self-interest until a ton of living men and women shall be conveyed, not in the demoralizing crowd and rush of an excursion train, but on all their sober every-day journeys, almost as cheaply as commercial railway directors now rejoice to carry for their friends a ton of dry bones or dead fish. A new system of railways for Great Britain is therefore proposed, the feasibility and advantage of which are beyond dispute.

The Imperial Railway will, on account of the strictly defined and limited powers to be granted to its directors, be incapable of being merged in the great railway monopoly, with which it must ever remain in useful competition; while owing to the fewness of its stations and its distinct and superior gauge, it will not only at all times offer a clear broad road on which the high speed already mentioned will be with safety and certainty maintained, but it will afford facilities for attempting a still greater speed of travelling, and perhaps be the means of carrying the science of locomotion to its utmost perfection.

There are, however, still more weighty reasons for seeking to realize the present project.

Peace is at all times a precarious blessing. We may hope and pray for it, but it is not ours to command it. Conjunctures, then, may arise in which it may be necessary to despatch in all haste large bodies of troops either to Ireland, Wales, or Scotland. It is computed that by means of the Imperial Railway

30,000 men, with all their baggage, artillery, and horses, could in less than four-and-twenty hours be transported from London either to Holyhead or Edinburgh. Excursion trains on the broad gauge (and be it remembered that an accident to a broad-gauge train is now scarcely ever recorded) have carried as many as 2,000 passengers at a time. It may therefore be confidently asserted that two regiments could be conveyed on the Imperial Railway in a single train. By using both the up and down lines to carry trains in the same direction, at least thirty such heavy trains could be despatched in six hours, and travel at the reduced speed of 40 miles an hour.

The Government, moreover, having undisputed control over a railway on which there would be no goods traffic to be interrupted, and being provided beforehand with every appliance for the conveyance of troops upon it, might at all times depend upon the use of it for the transport of an army, and would be able in time of war to effect, and to calculate on effecting, rapid military movements which with only our present means and all our northern railways made on the insufficient and dangerous tramroad-gauge, would be so utterly out of the question that it would be waste of time to enter into calculations how far they could be carried out.

The line hereafter to be made to Portland Harbour, which seems destined to become our principal mail-steamer and naval station, will pass through Aldershot, from which a branch of 40 miles in length would lead to Portsmouth. Other short branches

could be made from the Dover section to Chatham and Woolwich, and then every important naval and military post in the kingdom would be connected with each other and with London by broad-gauge railways. Such a connection would double the material defences of the country without the smallest addition to its taxation.

Another reason for urging the construction of the Imperial Railway lies in the fact that to a single irresponsible trading company now belongs the only access by railway to the harbour of Holyhead, which has been formed at the public expense, and to that magnificent line of steamers which draw a subsidy of £85,900 a-year from the public exchequer.

Having this advantage most injudiciously conferred upon them, the company in question, longing only for a ten per cent. dividend, are making the most strenuous efforts to secure a complete monopoly of the whole traffic in goods and passengers to and from Ireland. To rescue an important province from such greedy desires, and to prevent such a ruinous consummation, is surely the duty of our Government.

And when it is remembered that every private bill for any local improvement in Ireland, be it the draining of a bog, the inclosure of a mountain waste, the forming of a road or a railroad, the supplying of a town with gas, waterworks, or sewerage, the construction of a pier, or the making of a harbour, must be brought before a parliamentary committee sitting at Westminster, and that the principal cost of promoting or opposing any such bill consists in the

travelling expenses of numerous witnesses, who must be brought to London from Ireland, that country has good reason to consider itself heavily weighted in the race of civilization as long as a monopolizing company are permitted to place a toll-bar and demand what toll they please on the only available road between it and the seat of its legislature. No country can flourish without a tangible metropolis, so that the almost prohibitive toll of £2 6s. that is now demanded at Holyhead for transmission to London, which is the common metropolis of the whole United Kingdom, may be considered in the light of a political grievance, since it not only adds to the remoteness of Ireland from the centre of affairs, but also, by confirming its seclusion from the rest of the world, tends to perpetuate those ancient and injurious prejudices that are indisputably the chief cause of that country's ill success.

Only in a less degree but in a similar manner is Scotland taxed and its energies cramped by the scandalous combination of several railway companies for the purposes of extortion and monopoly; and travellers to the continent have just been candidly informed of the exact proportions in which all the spoil that can be got out of them is for the future to be divided between those two companies of railway Bedouins through whose "territory" they are obliged to pass.

These and other instances of rapacity are beginning to excite the indignant notice of the country.

It is at length perceived that the last fourteen

years, during which the material and intellectual resources of this kingdom have vastly increased, have failed to produce any corresponding benefit to railway travellers.

It is observed how, as opposition declines, the great amalgamated companies are exhibiting a determination to withdraw or curtail old facilities.

It is in fact becoming the general impression that the body of self-chosen men into whose hands the construction and management of our railways have been allowed to fall, are not those to whom such important functions ought to be intrusted.

Yet were the Government to snatch the reins in mid career out of the incompetent grasp of those speculators, usurers, land-jobbers, and company-mongers who now engross the direction of the public means of conveyance, the experiment might possibly lead to disaster and distress.

On the other hand, it cannot be conceded that an abuse which is now manageable should be quietly suffered to grow until it hardens into an incorrigible and instituted political evil.

The adoption of the Imperial Railway is therefore pointed out as a safe middle course.

It will from the very first be set up as a great railway to be conducted on honest, fixed, and intelligible principles, and when experience shall have decided that the effects of Government management have been beneficial, what more easy than to subject all our great railways to a similar control?

In the meantime, by the cheapness of its fares, by

its enforced punctuality, and by the easy and expeditious travelling it will supply, the new system will afford a standing pattern to its neighbours, and thus by the mere force of example it will produce nearly all the reforms that are of necessity required.

It is, no doubt, the conviction that such reforms must be the result of inaugurating a leading English Railway under Government control, which has instigated the wrathful denunciation of the project by the defenders of "existing interests."

But an unbiassed and enlightened public will be able to estimate aright the merits of an undertaking, which if carried out in its integrity will be one of the cardinal improvements of our time; which will serve to multiply and quicken the means of epistolary and personal intercourse, and to remove from the latter an onerous and unnecessary tax; which will strengthen the hands of our rulers to check the growth of an odious and dangerous combination of monopolists; and which will not only add to the material defences of the country, but by cementing the social and political union of our great provinces, and breaking down the barriers that now separate friends, families, and fellow-subjects, will promote in the nation at large that similarity of sentiment and identity of interest which are the most invulnerable of all bulwarks, and the greatest earthly security for internal and external peace.

## APPENDIX A.

THE cost of making a railway on the broad gauge exceeds that of making a railway on the narrow gauge by about ten per cent.; but when made, the effective carrying capability of the former is *more than three times* that of the latter.

The carrying capability of railways varies as the cubes of the measure of their gauges; and as 7 ft. is almost exactly one-half more than 4 ft. 8½ in., it follows that the carrying capability of a broad-gauge line may be said to be to one made on the narrow gauge as the cube of 3 is to the cube of 2, or as 27 is to 8.

The superior safety of the broad-gauge railways arises from the fact that they have always been worked within their capabilities, and consequently within the limits of safety; whereas the narrow-gauge lines, having been worked so as to obtain from them the greatest possible effect, the limits of safety in their case have been already reached, if not exceeded.

It is the overhanging weight of the narrow-gauge engines that not only renders them dangerous at high speeds, but also, by their rolling and unsteady motion, rapidly destroys the rails and road.

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## APPENDIX B.

THE published accounts of all railway companies during the last thirty years, the returns of the Board

of Trade, as well as the Post-Office estimate of the expense of running mail trains, and every other source of information that can be obtained, all combine to prove that *one seventh of a penny per mile* may be set down as the normal cost of conveying a passenger by railway in a first-class carriage.

The following table, therefore, is appended in order to exhibit as clearly as possible the extent to which the charge now made for carrying a passenger from London to several of the principal towns of the kingdom is in excess of the actual cost:—

| | Distance in miles. | Actual cost of conveying a single passenger. | | Present fare. | | |
|---|---|---|---|---|---|---|
| | | *s.* | *d.* | £ | *s.* | *d.* |
| London to Brighton | 50½ | | 7¼ | | 11 | 0 |
| „ „ Cambridge | 57½ | | 8¼ | | 11 | 0 |
| „ „ Oxford | 63 | | 9 | | 11 | 0 |
| „ „ Southampton | 80 | | 11½ | | 17 | 6 |
| „ „ Dover | 80 | | 11½ | | 19 | 0 |
| „ „ Birmingham | 113 | 1 | 4 | 1 | 0 | 0 |
| „ „ Bristol | 118 | 1 | 5 | 1 | 6 | 1 |
| „ „ Exeter | 173 | 2 | 0¾ | 2 | 0 | 0 |
| „ „ Manchester | 189 | 2 | 3 | 1 | 13 | 0 |
| „ „ Leeds | 192½ | 2 | 3½ | 1 | 13 | 0 |
| „ „ Liverpool | 202 | 2 | 5 | 1 | 15 | 0 |
| „ „ Holyhead | 264 | 3 | 1½ | 2 | 6 | 0 |
| „ „ Milford Haven | 285 | 3 | 5 | 2 | 9 | 6 |
| „ „ Edinburgh | 400 | 4 | 9 | 3 | 10 | 0 |
| „ „ Glasgow | 408 | 4 | 10¼ | 3 | 10 | 0 |
| „ „ Aberdeen | 559 | 6 | 8 | 4 | 0 | 0 |

The above calculations are based on the fact that a train containing two hundred passengers can easily be drawn by one engine. But it seems almost certain

that if fares were reduced to 1d., ¾d., and ½d. per mile for first, second, and third class respectively, the average number of passengers conveyed in each train would exceed two hundred. To none perhaps are the present prohibitory fares so ruinous as to railway companies themselves, and to those more especially whose lines are not as yet over-crowded with traffic.

As a remarkable instance of the mistaken policy of high fares may be mentioned the railway from London to Milford Haven. This line, which from its situation ought to be one of the most frequented trunk lines in England, is by an absurd system of extravagant charges rendered almost useless to the public, and entails on its owners both a loss and a disgrace; while the magnificent natural harbour of Milford, which by its means might be within a cheap five hours' journey of London, and be filled in consequence with shipping like the Thames or the Mersey, remains as desolate-looking and deserted as an Arctic fiord.